DATS

Development Applications and Technical Services

Centers for Medicare & Medicaid Services

Electronic Submission of Medical Documentation (esMD)

HIH Technical Release Changes for November 16, 2020 Release – Final

Version 1.0

07/24/2020

Document Number: AR2020.11.0_HIH_TRC_Final

Contract Number: HHSM-500-75FCMC-19C0037

Table of Contents

List of Figures

List of Tables

1. Introduction

This Technical Release Changes document provides the interface and technical release changes that have been identified for:

1. The Electronic Submission of Medical Documentation (esMD) Change Requests (CR) that will be developed in the November 2020 release.

esMD Release AR2020.11.0 consists of application changes to esMD CR 31439 and other System CRs.

The following documents must be used in conjunction with the Release Summary:

1. Centers for Medicare & Medicaid Services (CMS) *Health Information Handler* (*HIH) Implementation Guide*.

The audience of this document are implementers, such as architects and developers, responsible for the exchange of supporting/attachment information among healthcare providers, HIHs, and their business associates, such as CMS.

2. Purpose

This document outlines the functional/technical aspects of the following functionalities that will be deployed in the November 2020 release:

1. To Adjust the currently implemented functionalities of X12N 278 Prior Authorization (PA) Request associated processing, for the few gaps which exist.

Note: This document does not address installation and configuration details of the actual implementation.

3. Assumptions

The esMD system complies with industry standards defined by various standards committees. Hence, it is extremely important that esMD participants adhere to the norms with the following assumptions:

1. Medicare providers shall have active signed agreements with their respective HIHs to exchange the electronic transactions via esMD (including Review Contractor (RC) outbound transactions with Protected Health Information (PHI);
2. All transactions use industry-accepted standards, where available, and must have appropriate security to ensure data is transmitted with integrity, confidentiality, and reliability, and with authentication of both the sender and receiver;
3. In general, the HIHs using a CONNECT Gateway must upgrade to CONNECT v4.0 (or higher); earlier versions of CONNECT are not compatible with CONNECT v4.4, i.e., being used by CMS. HIHs may use any CONNECT-compatible software if the esMD requirements are met, e.g., the software must send receipt acknowledgments as required by esMD and described in the *esMD HIH Implementation Guide*. For those HIHs submitting X12 transactions, a CONNECT-compatible X12 Gateway must be used;
4. All transactions initiated by HIHs will comply with the Transport Layer Security (TLS) v1.2 security standard;

5. All transmissions will adhere to the eHealth Exchange, formerly the Nationwide Health Information Network (NwHIN) standard;
6. Communications between the CMS esMD system and Medicare RCs will be asynchronous;
7. HIHs prepare Electronic Data Interchange (EDI) X12N 278Q PA requests using the Health Insurance Portability and Accountability Act (HIPAA) 5010 version guidelines;
8. HIHs utilize CONNECT with the Council for Affordable Quality Healthcare (CAQH) CORE X12 document submission service interface specification as an accepted transport option;
9. HIHs will send receipt confirmation to esMD for all EDI X12N 278R PA responses in EDI X12 format;
10. The HIHs must perform the necessary enhancements to their systems to submit PA program requests in EDI X12N 278 Request format;
11. The HIHs must perform the necessary enhancements to their systems to receive and process acknowledgements, notifications, and error messages for EDI X12N 278 PA program requests; and
12. For guidelines/ rules for Accredited Standards Committee (ASC) X12N/005010X217 (278) Health Care Services Review — Request for Review and Response (278) refer to Technical Report Type 3 (TR3).

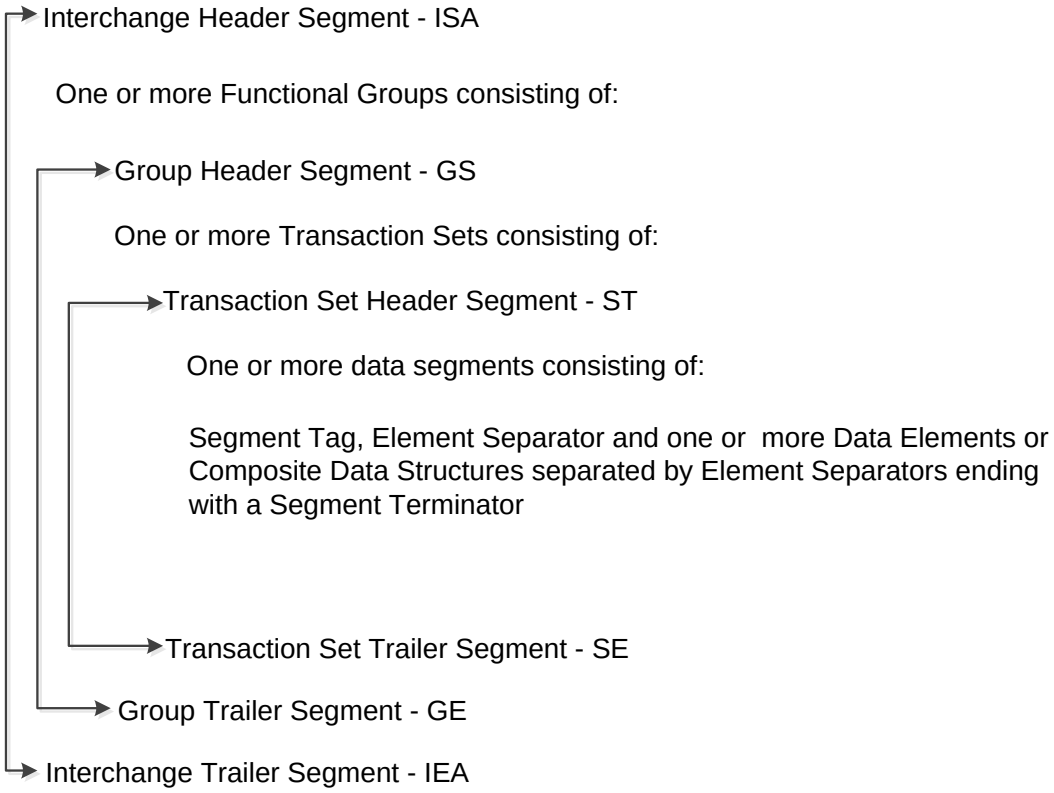
4. EDI X12 Definitions and Format

In the United States, organizations traditionally follow the American National Standards Institute (ANSI) standards for EDI document formats. ANSI is a private, non-profit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and more. A specific ANSI committee, ANSI Accredited Standards Committee (ASC) X12, developed the most common standard for EDI. The standard is often referred to simply as "ASC X12," or just "X12." The following list describes the structures of the X12 transaction set and the segments within them, and Figure 1: X12 Interchange Format describes the structure of the X12 transaction set:

1. The interchange is the highest-level structural element of an EDI message;
2. The interchange includes an envelope that defines the EDI message. The envelope must start with an Interchange Header (ISA), and it must end with an Interchange Trailer (IEA);
3. The ISA includes elements defining the sender and receiver, a date and time, a version number, a control number that matches the header and the trailer, and other information;
4. The IEA has an element that indicates the number of groups within the interchange;
5. The group contains one or more transaction sets;
6. A group must start with a Functional Group Header (GS), and it must end with a Functional Group Trailer (GE);
7. The GE has an element that indicates the number of transaction sets within the group;
8. The transaction set contains segments that make up the message data. The transaction set consists of a header, a collection of data segments, and a trailer. All details that are required to process the transaction are available within the transaction set;

9. A transaction set must start with a Transaction Set Header (ST) and it must end with a Transaction Set Trailer (SE);
10. The SE trailer provides a count of the data segments that includes the header and trailer segments;
11. A transaction set can contain one or more loops, which are required to repeat a collection of related segments;
12. The segment contains one or more data elements;
13. Segments start with one or two- or three-character data segment identifier, and ends with a segment terminator; and
14. A segment is classified as Mandatory or Optional.

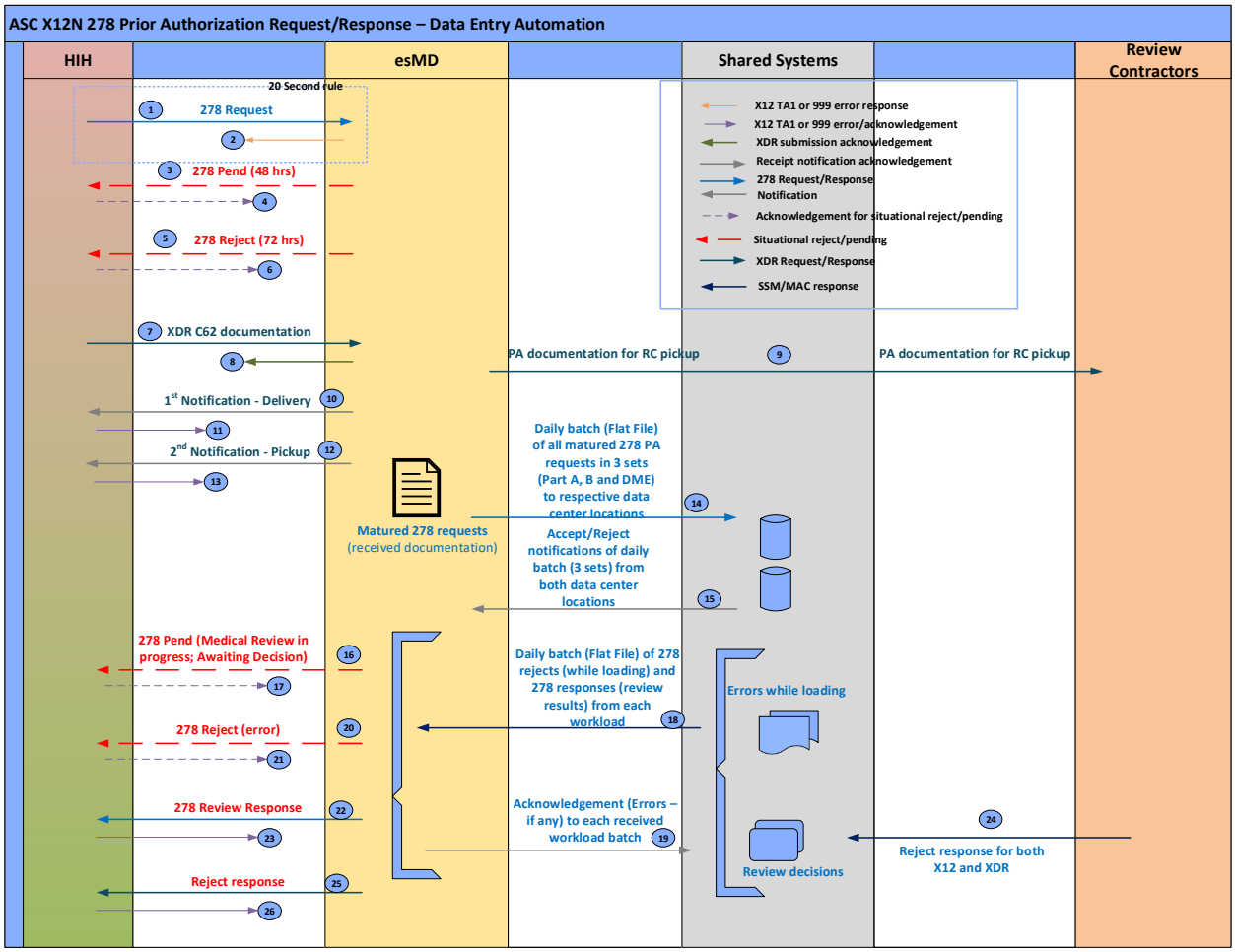
Figure 1: X12 Interchange Format



5. X12N 278 Data Flow

Figure 2: X12N 278 PA Data Flow shows the X12N 278 PA request and response flow.

Figure 2: X12N 278 PA Data Flow



1. HIH submits a 278Q Prior Authorization request;
2. esMD sends a 20-second response to the HIH;
3. esMD sends a 2- business day reminder to submit supporting documentation using eXternal Data Representation (XDR) or X12 275 submissions for pending 278Q requests (optional);
4. HIH acknowledges the 2- business day reminder notification (situational);
5. esMD sends a 4- business day rejection notification for failing to submit supporting documentation using XDR or X12 275 submissions or pending 278Q requests (optional);
6. HIH acknowledges the 4-business day rejection notification (situational);
7. HIH sends supporting documentation via XDR or X12 275 submissions;
8. esMD acknowledges the supporting documentation request;

9. esMD delivers the Review Contractor (RC) Package (which has payload, RC Metadata Extensible Markup Language (XML) file, etc.) to the TIBCO Managed File Transfer (MFT) server for RCs to pick up;

10. esMD sends "Document Sent to Enterprise File transfer" notification back to the HIH after the RC Package is sent to the TIBCO MFT Server;

11. HIH acknowledges the delivery notification sent by esMD;

12. RC downloads the Package, sends the RC pickup notification back to esMD. esMD sends the received RC pickup notification to the HIH;

13. HIH acknowledges the RC pickup notification sent by esMD;

14. esMD packages in Daily batch files all mature X12 PA requests to the Shared System in three sets (Part A, Part B, and DME) to the respective data centers;

15. Accept/Reject notifications from data centers to esMD;

16. esMD sends the Pending Review notifications to the HIH for requests that are not Rejected by the Shared System;

17. HIH acknowledges the pending notification response;

18. esMD receives the rejects while loading or decision response from each workload;

19. esMD acknowledges Workload batch file for the errors in the Workload batch file;

20. esMD sends the 278 reject errors to HIH;

21. HIH acknowledges the reject errors to esMD;

22. esMD sends the Review Result notifications to the HIH for X12/XDR requests that are received from the Shared System;

23. HIH acknowledges the Review Result notifications;

24. RC sends the Reject response via RC Client (only at a transaction level) to esMD;

25. esMD sends the Reject response from RCs to HIH; and

26. HIH acknowledges the Reject response notifications.

6. Existing X12N 278 PA Request Process Gaps

esMD currently supports PA Programs by accepting the same, in X12N 278 transactions. The various supported PA Programs are Non-Emergent, Repetitive Ambulance Transport, Home-Health Pre-Claim Review (HH-PCR), and Durable Medical Equipment, Prosthetics, Orthotics and Supplies (DMEPOS).

esMD accepts the supporting documentation for the PA Request, via XDR format or X12N 275 transactions.

During the November 2020 release implementation, esMD system will be updated to ensure that the PA X12N 278 Request and Response based functionality is fully functional, across every step of the information flow from HIH/Providers to the Review Contractors and across all the esMD supported PA Programs.

The following are some of the changes identified with respect to X12N 278 request and response.

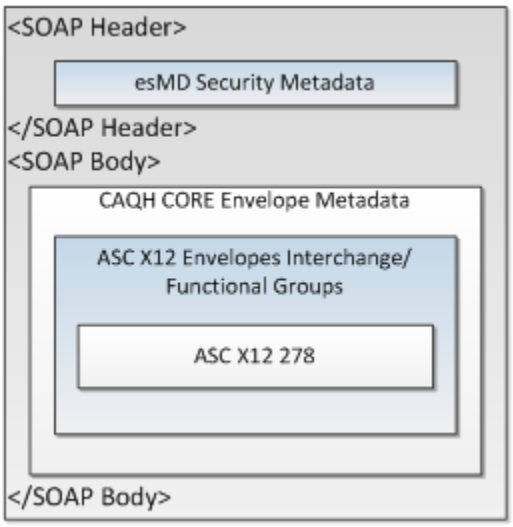
1. CAQH Payload ID must be unique in every X12N 278 request that is submitted to esMD system. Any request with duplicate Payload ID identified will generate an error response to HIH;
2. esMD will ensure that the all the required validations are getting performed correctly, for all the supported PA/PCR Programs. (Single or multiple line service);
3. esMD will process Reject Responses with AAA errors and generate X12N 278 response to HIHs/Providers, for the associated PA request.
4. The supporting documentation for the given X12 278 request can be send in XDR format for X12N 275 format. For a X12N 278 request, if the initial supporting documentation was sent as X12N 275 transaction, the subsequent supporting documentation (if submitted) must also be X12N 275 transaction. Supporting documentation cannot be sent interchangeably (XDR and X12N 275) for the same X12N 278 request.
5. The Attachment Control Number (ACN) in X12 278N request must be between 2 and 50 characters in length and shall contain alphabets or numbers(A-Z,a-z,0-9) only. The same ACN value must be provided in the additional documentation submission (XDR CTC 13 or X12N 275).

7. The esMD System CAQH Profile

7.1 Request Layout

The “CAQH CORE X12 Document Submission Service Interface Specification” defines specific constraints on the use of the CAQH CORE Connectivity Rule. Figure 3: ASC X12N 278 5010 over CONNECT (CAQH CORE 270) presents the components of a request or response message using 278 and CONNECT with the Nationwide Health Information Network (NHIN) CAQH CORE X12 Document Submission Service Interface Specification.

Figure 3: ASC X12N 278 5010 over CONNECT (CAQH CORE 270)



7.2 CAQH CORE Real-Time Mode (Synchronous) and CAQH CORE Generic Batch Mode (Deferred) Messaging

HIHs planning to submit X12N 278 5010 requests to the esMD system must implement the Phase II CAQH CORE Rule 270 Connectivity Rule, Version 2.2.0.

This connectivity rule allows for the following two modes of messaging:

- Real time mode (i.e., Synchronous); and
- Batch mode (i.e., Deferred).

The HIH shall use the real time mode, i.e., synchronous messaging, for sending an X12N 278 5010 request to the esMD system. In this real-time mode, the HIH that sent the X12N 278 5010 request shall receive a response for that request within 20 seconds. This response is considered to be the equivalent of the "first notification" used in the XDR profile.

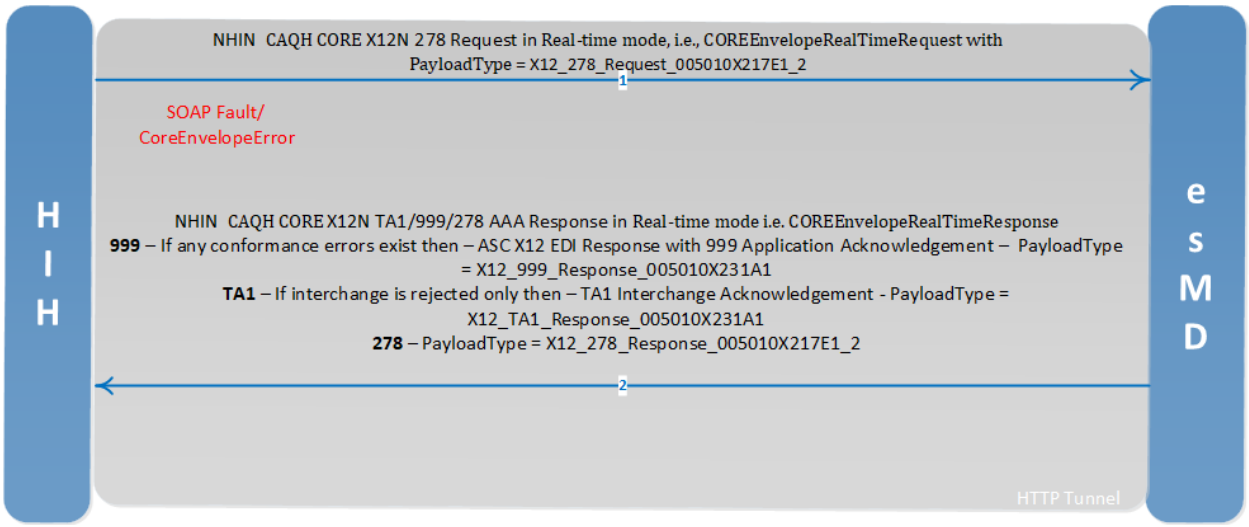
The esMD system shall send the "second notification", i.e., the "pickup status/error" notification and the "third notification", i.e., the "PA Review Response", using the Batch mode (i.e., for deferred messaging).

The difference between the real time and the batch mode, other than the response times, is that the Message Transmission Optimization Mechanism (MTOM) is used for sending an attachment in the batch mode.

7.3 HIH to the esMD - CAQH PA Request (Real Time)

1. HIH submits to the esMD a X12N 278 5010 real-time authorization request in CAQH envelope. See
2.
3. Figure 4: X12 PA Request in CAQH Real Mode

Figure 4: X12 PA Request in CAQH Real Mode



Once esMD has identified the request as a X12N 278 5010, the esMD will have a fixed amount of time to process the request, (20 seconds for real-time). Otherwise, the request times out. If the request times out, the HIH will get a timeout error and will need to resubmit the request.

4. If the esMD is unavailable, the HIH will receive an HTTP 500 error;
5. If there are any Errors in the CAQH envelope, the HIH will receive a COREEnvelopeRealTimeResponse with PayloadType as CoreEnvelopError; and
6. The esMD will process the CAQH request and retrieve the EDI payload. A response is created the same business day (within 20 seconds) the file is submitted and sent back to the HIH.
    a. If data in the Interconnection Security Agreement (ISA) segment is not valid and the EDI payload could not be extracted, the esMD will send a COREEnvelopeRealTimeResponse with PayloadType as CoreEnvelopError and appropriate error message;
    b. If the interchange is rejected, A TA1 Interchange Acknowledgement is generated and sent back to the HIH;
    c. A real-time acknowledgement is created and sent back to the HIH if the submitted X12N 278 5010 file fails format edits;
    d. Transactions that pass the validation process but fail further in the processing (for example; ineligible member) will generate a 278 real-time response.

7.4 CAQH Metadata

Phase II CAQH CORE Rule 270: Connectivity Rule Version v2.2.0 defines a set of metadata used for message routing, transaction auditing, transaction scheduling, resource allocation, backward compatibility, error handling, and audit logging. The required CAQH CORE Metadata for the esMD is listed in Table 1: CORE Envelope Metadata.

Table 1: **CORE Envelope Metadata**

CORE Field	Requirement	Data Type	Definition	Value or Field Constraints for the esMD
PayloadType	R	Coded Set	Payload Type specifies the type of payload included within the request/response, (e.g., HIPAA ASC X12 transaction set 278).	X12_278_Request_005010X217E1_2 X12_278_Response_005010X217E1_2 CoreEnvelopeError X12_TA1_Response_00501X231A1 X12_999_Response_005010X231A1
ProcessingMode	R	Coded Set	Processing Mode indicates Batch or Real-time processing mode (as defined by CORE)	RealTime
PayloadID	R	String	Payload ID (unique within the domain of the party that sets this value) is a payload identifier assigned by the sender. If the payload is being resent in the absence of confirmation of receipt to persistent storage, the same Payload ID may be re-used.	Unique to esMD system for the X12N 278 request
TimeStamp	R	dateTime	The Sender (request) or Receiver (response) Time Stamp combines time and date message metadata into a single Coordinated Universal Time (UTC) time stamp (including time zone information) specifying when a message is created and sent to a receiver. This does not require a shared time server for consistent time.	Date and Time the Message was created
SenderID	R	String	A unique business entity identifier representing the message envelope creator.	HIH OID. **Note**: Please include HIH EDI ID in the X12 Onboarding request form or esMD can create an EDI for HIH if preferred.
ReceiverID	R	String	A unique business entity identifier representing the next-hop receiver.	Receiver OID

CORE Field	Requirement	Data Type	Definition	Value or Field Constraints for the esMD
CORERuleVersion	R	Coded Set	The CORE Rule version that this envelope is using. This value can be used to maintain backward compatibility when parsing/processing messages.	v2.2.0
ErrorCode	R (for a response to an ASC X12 transaction)	Coded Set	Error code to indicate the error when processing the envelope (includes “Success” response).	Refer to Phase II CAQH CORE Rule 270: Connectivity Rule Version v2.2.
ErrorMessage	R (for a response to an ASC X12 transaction)	String	Text Error message that describes the condition that caused the error. The text of the ErrorMessage must provide additional information describing how the Error can be resolved and must not provide conflicting information from that provided in the ErrorCode.	N/A

8. X12N 278 5010 Companion Guide

For details on the X12N 278 5010 requests and responses, refer to the Companion Guide available here:

https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/ESMD/Information_for_HIHs.html

Note: The latest version of X12N 278 Companion Guide will be made available once it’s ready.

9. Reconciliation Report

1. The transaction status will be marked as “Complete” as soon as the Pickup notification is received.
2. HIH delivery failures will no longer impact the status of transactions and the status of the transaction will be marked “Complete” after esMD attempts to deliver to HIH.
3. When the PA Responses could not be delivered to the HIH or fails validations, transaction requests are still to be considered as complete.
4. When the Administrative error response is received from the Review Contractor, the transaction status will be set to “invalid”.
5. Audit event/exception description will be displayed for all the statuses on the report.

Appendix A: Record of Changes

Table 2: Record of Changes

Version Number	Date	Author/Owner	Description of Change
1.0	7/24/2020	Viji Muthukrishnan	Final version of HIH Technical Release Changes

Appendix B: Acronyms

Table 3: Acronyms

Acronym	Literal Translation
ANSI	American National Standards Institute
ASC	Accredited Standards Committee
CMS	Centers for Medicare & Medicaid Services
CR	Change Request
CAQH	Council for Affordable Quality Healthcare
DMEPOS	Durable Medical Equipment, Prosthetics, Orthotics and Supplies
esMD	Electronic Submission of Medical Documentation
EDI	Electronic data interchange
GE	Functional Group Trailer
GS	Functional Group Header
HIH	Health Information Handler
HIPAA	Health Insurance Portability and Accountability Act
ISA	Interchange Control Segment
IEA	Interchange Control Trailer
MTOM	Message Transmission Optimization Mechanism
NHIN	Nationwide Health Information Network
PA	Prior Authorization
PDF	Portable Document Format
PHI	Protected Health Information
RC	Review Contractor
SE	Transaction Set Trailer
ST	Transaction Set Header
TR3	Technical Report Type 3
TRC	Technical Release Changes
XDR	Cross-Enterprise Document Reliable Interchange
XML	Extensible Markup Language
XSD	XML Schema Definition

Appendix C: Referenced Documents

Table 4: Referenced Documents

Document Name	Document Location and/or URL	Issuance Date
HIH Implementation Guide for AR2020.11.0	TBD	TBD